

ABSTRACT OF THE INVENTION

A system and method for configuring lightpaths within an optical circuit wherein the source node stores requests for a lightpath between the source node and the destination node. Upon receipt of a token at the source node indicating an available space 5 within a wavelength, the source node selects a request stored within the queue based upon a best fit window protocol. A lightpath is then established between the source node and the destination node responsive to a selected request.